

Wyoming Department of Environmental Quality
Air Quality Division FY-2018 Annual Inspection Report



Matthew H. Mead, Governor

Todd Parfitt, Director

Company:	Colorado Interstate Gas Company, LLC	
Facility:	Elk Basin Compressor Station	
AFS:	5602900006	
IMPACT Facility:	F000225	
IMPACT Inspection ID:	INSP006643	
Title V Status:	Major - Permit P0022137 (3-4-044)	
Responsible Official:	Ted Meinhold, Division Director	
Telephone Number:	970-208-1268	
Address of Firm:	2527 Foresight Circle Grand Junction, CO 81505	
Type of Operation:	Natural Gas Compressor Station	
Facility Location:	Lat/Long: 44.97875/-108.84178 NE 1/4 Section 29, T58N, R99W, Park County	
Company Representatives:	John Stokes, Rawlins North Supervisor Geoff Slater, Operator	
Division Representative:	Jon Walker, Air Quality Engineer <i>[Signature]</i>	
Inspection Date:	March 28, 2018	
Report Date:	April 2, 2018	
Staff Review:	Nancy Vehr, Administrator <i>[Signature]</i> 4-12-18 Lars Lone, Compliance Program Manager <i>[Signature]</i> 4/9/18 Greg Meeker, District 4 Engineer <i>[Signature]</i>	
Last Inspection	October 6, 2015	
Summary Tables		
<input checked="" type="checkbox"/> Compliance Reports	<input checked="" type="checkbox"/> Stack Tests	<input type="checkbox"/> CEM Data

COMPLIANCE STATUS

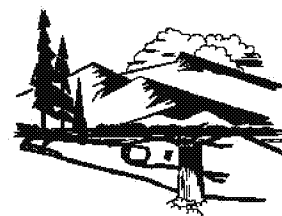
The Colorado Interstate Gas Company Elk Basin Compressor Station was found to be operating in compliance with applicable Wyoming Air Quality Standards and Regulations.

AIR QUALITY CONCERNS

The fiscal year 2018 inspection of the Colorado Interstate Gas Company Elk Basin Compressor Station produced no air quality concerns.



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COMPLIANCE STATUS

The Colorado Interstate Gas Company Elk Basin Compressor Station was found to be operating in compliance with applicable Wyoming Air Quality Standards and Regulations.

AIR QUALITY CONCERNS

The fiscal year 2018 inspection of the Colorado Interstate Gas Company Elk Basin Compressor Station produced no air quality concerns.

PREVIOUS AIR QUALITY CONCERNS

The previous inspection of the Colorado Interstate Gas Company Elk Basin Compressor Station on October 6, 2015, produced no air quality concerns.

INSPECTION NARRATIVE

At 9:15 on Wednesday, March 28, I arrived at the Colorado Interstate Gas (CIG) Elk Basin Compressor Station to conduct an annual inspection. Station Operator Mr. Geoff Slater was at the facility when I arrived. CIG Site Lead Rawlins North Operations Mr. John Stokes and Operations Specialist Mr. Otto Phillips arrived a short time later. After completing site specific safety training we discussed the requirements of 40CFR63 Subpart ZZZZ. The facility is a major source of HAPs and so the two-stroke Dresser-Clark HLA10T compressor engines are exempt from requirements. We briefly discussed and reviewed records for the maintenance and monitoring that is required for the Caterpillar G3408C emergency generator. Records are included in Appendix A.

Mr. Stokes and I then proceeded to tour the facility. Significant sources at the facility include (2) 2800 horsepower Dresser-Clark HLA10T compressor engines and the 375 hp Caterpillar G3408 emergency generator engine. There were no sources operating during the visit as the facility spends the majority of the time in stand-by as other engines in the area provide pipeline compression. The 2SLB Clark compressor engines have no catalysts or emissions control systems. Operating hours for year-to-date 2018 are 145 for Unit 11 and 5 hours for Unit 12. Having inventoried and photographed sources and reviewed operating data, I thanked Mr. Stokes, Mr. Slater, and Mr. Phillips for their assistance and left the facility at about 10:10. The 2018 site inspection of the Colorado Interstate Gas Elk Basin Compressor Station produced no air quality concerns.

PROCESS DESCRIPTION:

The Elk Basin Compressor Station compresses natural gas produced from nearby well sites for transmission into CIG's pipeline to the Denver, Colorado area. The facility includes two Clark HLA10T Compressor Engines site rated at 2800 hp. These compressors, installed in 1972, are located within the confines of Encore Petroleum's Elk Basin Gas Processing Plant but they are owned and operated by CIG. A 375 hp Caterpillar G3408LE emergency generator engine began operation in 2010.

EMISSIONS UNIT SUMMARY:

COMPANY ID	IMPACT ID	TYPE	DESCRIPTION	CH 6, SEC 2 PERMITS
CG-11	ENG001	EU	2,800 hp Dresser-Clark HLA10T Compressor Engine (2SLB)	AP-3072
CG-12	ENG002	EU	2,800 hp Dresser-Clark HLA10T Compressor Engine (2SLB)	AP-3072
G1	ENG003	EU	375 hp Caterpillar G3408C LE Generator Engine (4SLB)	P0020251

TOTAL FACILITY ESTIMATED EMISSIONS

For informational purposes only. These emissions are not to be assumed as permit limits.

POLLUTANT	EMISSIONS (TPY)
CRITERIA POLLUTANT EMISSIONS	
Particulate Matter	10
PM ₁₀ Particulate Matter	10
PM _{2.5} Particulate Matter	10
Sulfur Dioxide (SO ₂)	<1
Nitrogen Oxides (NO _x)	661
Carbon Monoxide (CO)	81
Volatile Organic Compounds (VOCs)	25
HAZARDOUS AIR POLLUTANT (HAP) EMISSIONS	16.6*
GREENHOUSE GAS EMISSIONS (CO ₂ e)	24,354

Emission estimates are from the operating permit application.

* The highest single HAP is formaldehyde at 11.5 TPY.

ANNUAL EMISSIONS:

Actual estimated annual for the last three years are shown below. Annual permitted criteria pollutant levels in the current operating permit 3-4-044 include 10 tons of PM and PM10, 661 tons of NOx, 81 tons of CO, 25 tons of VOC's and 16.6 tons of HAPs of which formaldehyde is the largest single HAP at 11.5 tpy. Emissions are largely proportional to the operating hours of the two Dresser-Clark HLA10T 2-cycle lean burn compressor engines. As of the March 28, 2018 inspection, year-to-date operating hours for the compressor engines are 145 and 5 for Units 11 and 12, respectively. Year 2015 to 2017 emissions are summarized as follows:

CIG Elk Basin Compressor Station Year 2017 Emissions (tons)

PM Primary (includes filterables > 10 microns + condensibles)	1.0
PM10 Primary (includes filterables + condensibles)	1.0
PM2.5 Primary (includes filterables + condensibles)	1.0
CO - Carbon Monoxide	10.9
NOx - Nitrogen Oxides	88.6
SO2 - Sulfur Dioxide	0.0
VOC - Volatile Organic Compounds	3.7
Ammonia	0.001

Note: The Dresser-Clark HLA10T compressor engines operated a total of 2362 hours in 2017.

CIG Elk Basin Compressor Station Year 2016 Emissions (tons)

PM Primary (includes filterables > 10 microns + condensibles)	0.7
PM10 Primary (includes filterables + condensibles)	0.7
PM2.5 Primary (includes filterables + condensibles)	0.7
CO - Carbon Monoxide	10.2
NOx - Nitrogen Oxides	81.7
SO2 - Sulfur Dioxide	0.0
VOC - Volatile Organic Compounds	3.7
Ammonia	0.0

Note: The Dresser-Clark HLA10T compressor engines operated a total of 2207 hours in 2016.

CIG Elk Basin Compressor Station Year 2015 Emissions (tons)

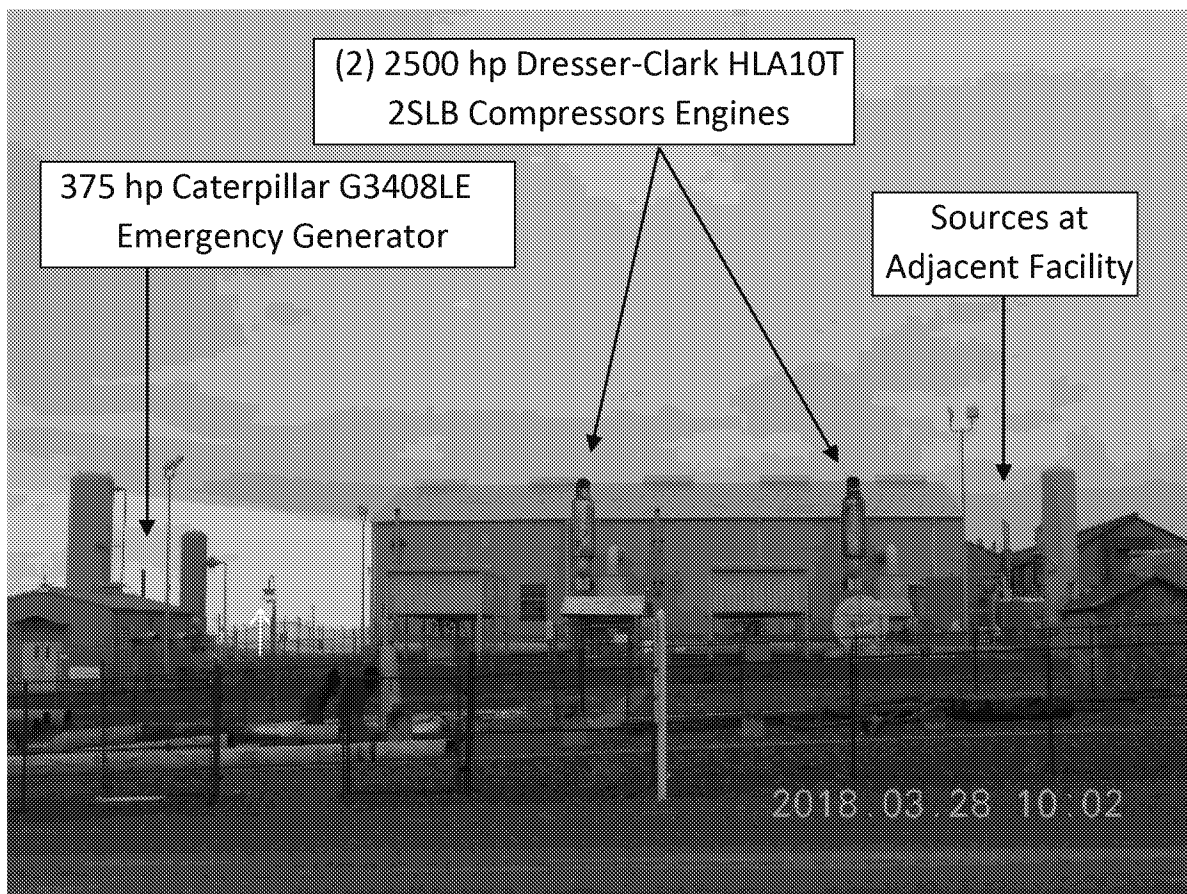
PM Primary (includes filterables > 10 microns + condensibles)	0.0
PM10 Primary (includes filterables + condensibles)	0.0
PM2.5 Primary (includes filterables + condensibles)	0.0
CO - Carbon Monoxide	0.8
NOx - Nitrogen Oxides	0.25
SO2 - Sulfur Dioxide	0.0
VOC - Volatile Organic Compounds	0.3
Ammonia	0.0

Note: The Dresser-Clark HLA10T compressor engines operated a total of 25 hours in 2015.

FACILITY PHOTOGRAPHS:

The following photographs were taken at the March 28, 2018 annual inspection of the Colorado Interstate Gas Elk Basin Compressor Station.

WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
Colorado Interstate Gas Elk Basin Compressor Station, 2017-03-28



SOURCE OBSERVATION SUMMARY TABLE

CIG Elk Basin Compressor Station Source Observations, March 28, 2018			
Company ID	IMPACT ID	Company Equipment ID/Description	Operating Status
CG-11	ENG001	2,800 hp Dresser-Clark HLA10T Compressor Engine (2SLB)	No
CG-12	ENG002	2,800 hp Dresser-Clark HLA10T Compressor Engine (2SLB)	No
G1	ENG003	375 hp Caterpillar G3408C LE Generator Engine (4SLB)	No

STACK TEST REPORT SUMMARY TABLE

CIG Elk Basin Compressor Station Emissions Stack Test Summary					
Stack Test ID	EUs	Stack Test Method	Test Date(s)	Date Received	Date Reviewed
STCK024979	ENG003	Methods 320 and/ or ASTM D 6348-03- NOx, CO, & VOC- FTIR Engine Failed NOx g/hphr and was re-permitted	11/13/2015	12/17/2015	12/29/2015
STCK020720	ENG003	(1) 1-Hour M1-4, 7E, 10, 25A for NOx, CO, VOC	10/24/2012	11/30/2012	11/30/2012
STCK014620	ENG003	(3) 1-Hour M1-4, 7E, 10, 25A for NOx, CO, VOC	2/9/2010	3/15/2010	---

Colorado Interstate Gas Elk Basin Compressor Station Compliance Report Summary

Report ID	Category	Description	Received Date	Reviewed Date	Comments
CRPT026341	Semi-annual Monitoring and/or Maintenance	2017 S2 SA	1/30/2018	1/31/2018	Permit 3-3-044 S2-17 Semi-Annual Monitoring Report, Submitted through IMPACT for RO F11(a) Condition F7: Natural gas only in engines. F11(b) Condition F8(b): Caterpillar G3408CLE unit G1 operated 44.75 hours in 2017. F11(c) No Deviations . F11(d) Not Signed by RO Meinhold - Submitted through Impact and e-signed. In Compliance.
CRPT026342	Annual Compliance Certification (Title V)	2017 CC	1/30/2018	1/31/2018	Permit 3-3-044 2017 Annual Compliance Certification signed by RO Meinhold C1(b)(i) Continuous; F2/F7 No visible emissions; Units natural gas fired only C1(b)(ii) P0020251 removed the test requirement. G3408CLE operated 26 hours in 2016 (<500 F3(b)) C1(b)(iii) Continuous F12, No GHG reporting required. C1(b)(iv) Continuous; Engines have no requirements under 40CFR60 Subpart JJJJ. C1(b)(v) Continuous, No requirements under 40CFR63 Subpart ZZZZ; Facility is Major source of HAP with all lean burn engines. G1 is emergency and operated less than 100 hours. C1(c) Compliance status and intermittent or continuous included. C1(d) No compliance plan required. C1(e) Signed by RO Meinhold via IMPACT submittal; Sent to EPA C1(f) ok Facility Specific, General, State, and NSPS all in continuous compliance. No deviations reported. In Compliance.
CRPT022603	Semi-annual Monitoring and/or Maintenance	2017 S1 SA	7/27/2017	8/2/2017	Permit 3-3-044 S1-17 Semi-Annual Monitoring Report, Submitted through IMPACT for RO F11(a) Condition F7: Natural gas only in engines. F11(b) Condition F8(b): Caterpillar G3408CLE unit G1 operated 15.25 hours in S1-17. F11(c) No Deviations . F11(d) Not Signed by RO Meinhold - Submitted through Impact and e-signed. In Compliance.
CRPT018084	Annual Compliance Certification (Title V)	2016 CC	1/24/2017	1/25/2017	Permit 3-3-044 2016 Annual Compliance Certification signed by RO Meinhold C1(b)(i) Continuous; F2/F7 No visible emissions; Units natural gas fired only C1(b)(ii) P0020251 removed the test requirement. G3408CLE operated 26 hours in 2016 (<500 F3(b)) C1(b)(iii) Continuous F12, No GHG reporting required. C1(b)(iv) Continuous; Engines have no requirements under 40CFR60 Subpart JJJJ. C1(b)(v) Continuous, No requirements under 40CFR63 Subpart ZZZZ; Facility is Major source of HAP with all lean burn engines. G1 is emergency and operated less than 100 hours. C1(c) Compliance status and intermittent or continuous included. C1(d) No compliance plan required. C1(e) Signed by RO via IMPACT; Sent to EPA C1(f) ok Facility Specific P0020251, General, State, and NSPS all in continuous compliance. No deviations reported. In Compliance.
CRPT018083	Semi-annual Monitoring and/or Maintenance	2016 S2 SA	1/24/2017	1/25/2017	Permit 3-3-044 S2-16 Semi-Annual Monitoring Report, Submitted through IMPACT for RO F11(a) Condition F7: Natural gas only in engines. F11(b) Condition F8(b): Caterpillar G3408CLE unit G1 operated 26 hours in 2016. F11(c) No Deviations . F11(d) Not Signed by RO Meinhold - Submitted through Impact and e-signed. The attached report incorrectly shows the monitoring period as January 1 through June 30, but the cover letter and this IMPACT submittal from CIG shows the correct period from July 1 to December 31. Revision not requested. In Compliance.
CRPT014249	Semi-annual Monitoring and/or Maintenance	2016 S1 SA	7/28/2016	8/2/2016	Permit 3-3-044 S1-16 Semi-Annual Monitoring Report, Submitted through IMPACT for RO F11(a) Condition F7: Natural gas only in engines. F11(b) Condition F8(b): Caterpillar G3408CLE unit G1 operated 10 hours in reporting period. F11(c) No Deviations . F11(d) Not Signed by RO Meinhold - Submitted through Impact and e-signed. In Compliance.
CRPT010268	Annual Compliance Certification (Title V)	2015 CC	1/28/2016	2/2/2016	Permit 3-3-044 2015 Annual Compliance Certification signed by RO Meinhold C1(b)(i) Continuous; F2/F7 No visible emissions; Units natural gas fired only C1(b)(ii) Out/Intermittent F3/F7, Caterpillar G3408CLE monitoring conducted 11/13/15 indicated high NOx g/hphr. Permit modification Pending. G3408CLE operated 19.25 hours from Semi-annual reporting (<500 F3(b)) C1(b)(iii) Continuous F12, No GHG reporting required. C1(b)(iv) Continuous; Engines have no requirements under 40CFR60 Subpart JJJJ. C1(b)(v) Continuous, No requirements under 40CFR63 Subpart ZZZZ; Facility is Major source of HAP with all lean burn engines. C1(c) Compliance status and intermittent or continuous included. C1(d) No compliance plan required pending increase in NOx limit for G1. C1(e) Signed by RO via IMPACT; Sent to EPA C1(f) ok In Compliance. Deviation noted for g/hphr on G1.
CRPT010267	Semi-annual Monitoring and/or Maintenance	2015 S2 SA	1/28/2016	2/2/2016	Permit 3-3-044 S2-15 Semi-Annual Monitoring Report, Submitted through IMPACT for RO F11(a) Condition F7: Natural gas only in engines. F11(b) Condition F8(b): Caterpillar G3408CLE unit G1 operated 19.25 hours in reporting period. F11(c) Deviation for NOx g/hphr on G1 ; Emissions limit to be increased for this emergency generator. F11(d) Not Signed by RO Meinhold - Submitted through Impact and e-signed. In Compliance.

TITLE V AND NSR PERMITS:

Permit Number	Legacy Permit No.	Type	Final Issuance Date	Description
P0022137	---	Title V Permit	2/21/2018	3-4-044; renewal
P0020251	---	NSR	8/29/2016	Authorized the 375 hp Caterpillar G3408C LE generator engine, ENG003. The limit was set for the generator, to 100 hours of non-emergency operation per year and the requirement for installation, and operation of a non-resettable hour meter to demonstrate compliance.
P0014746	3-3-044	Title V Permit	5/30/2012	This facility compresses natural gas produced from nearby well sites for transmission into CIG's pipeline to the Denver, Colorado area. The facility includes two Clark HLA10T Compressor Engines site rated at 2800 hp.
P0005026	WV-9572	NSR	7/15/2009	Allowed for the installation of one 375 hp Caterpillar G3408C LE generator engine, ENG003. The requirements from this waiver were superseded by waiver P0020251.
P0005025	WV-3072	NSR	3/11/2005	Was issued for the installation of a gas driven starting system on the Dresser-Clark HLA10T compressor engines, ENG001 and ENG002. The waiver contained no applicable requirements.
The Colorado Interstate Gas Elk Basin Compressor Station was initially constructed in 1972, pre-dating WAQSR Ch 6, Sec 2 permitting requirements.				

PERMIT 3-3-044 and 3-4-044 CONDITIONS:

Note: Permit 3-4-044 was issued February 21, 2018 and Permit 3-3-044 was in effect until that time. The conditions of permit 3-4-044 are shown below. The requirements of permit 3-3-044 are substantially the same except as noted in the following conditions:

PERMIT 3-3-044 CONDITION F3:

(F3) ENGINE EMISSIONS [WAQSR Ch 6, Sec 2 Waiver AP-9572]

(a) NOX, CO, and VOC emissions from the Caterpillar G3408C LE generator engine (unit G1) shall not exceed 1.0 g/hphr NOx, 1.9 g/hphr CO, and 0.5 g/hphr VOC.

(b) The Caterpillar G3408C LE generator engine (unit G1) shall be limited to 500 hours of annual operation. The permittee shall operate and maintain a non-resettable hour meter to demonstrate compliance with the hours limit in this condition.

STATUS: Substantial Compliance. See Status of Condition F5 below, and Permit 3-4-044, Condition 11.

PERMIT 3-3-044 CONDITION F5:

(F5) SOURCE TESTING [WAQSR Ch 6, Sec 2 Waiver AP-9572]

For the Caterpillar G3408C LE generator engine (unit G1):

(a) The permittee shall conduct testing every three years for NOX, CO and VOC emissions. Testing shall consist of one 1-hour test following 40 CFR 60, Subpart JJJ §60.4244, except that §60.8 only applies to engines subject to 40 CFR 60, Subpart JJJ.

(b) If testing shows operation out of compliance:

(i) The permittee shall notify the Division within 24-hours if the engine testing/monitoring shows operation outside the emission limits specified in condition F3.

(ii) The permittee shall repair the engine no later than seven calendar days of such a testing/monitoring event, and shall repair and retest/monitor the affected engine to demonstrate the engine has been returned to operation within the limits in condition F3.

(iii) Compliance with this condition regarding repair and retesting/monitoring shall not be deemed to limit the authority of the Division to cite the owner or operator for an exceedance of the emission limits for any testing which shows noncompliance.

(c) The permittee shall provide test notification and test results as specified in condition F10.

(d) Testing shall be conducted in accordance with WAQSR Ch 5, Sec 2(h).

STATUS: Substantial Compliance. The Caterpillar G3408C LE generator engine failed g/hphr NOx during the November 13, 2015 triennial emissions test. P0020251 was issued August 29, 2016 to raise the NOx and CO limits from 1.0 g/hphr NOx, 1.9 g/hphr CO to 2.0 g/hphr NOx and 2.0 g/hphr CO. This permit also limited the engine to 100 hours of annual non-emergency operation and removed the triennial emissions test requirement. The engine was previously limited to 500 hours of annual operation under Permit 3-3-044.

PERMIT 3-4-044 CONDITIONS:

(F1) VISIBLE EMISSIONS [WAQSR Ch 3, Sec 2]

Visible emissions of any contaminant discharged into the atmosphere from any single emission source shall not exhibit greater than 20 percent opacity except for one period or periods aggregating not more than six minutes in any one hour of not more than 40 percent opacity.

STATUS: In Compliance. No visible emissions were noted during the inspection of this facility. All units burn natural gas only.

(F2) ENGINE OPERATING AND MAINTENANCE REQUIREMENTS [WAQSR Ch 6, Sec 2 Waiver P0020251]

(a) The Caterpillar G3408C LE generator engine, ENG003 (G1), shall be limited to 100 hours of annual non-emergency operation. The permittee shall operate and maintain a non-resettable hour meter to demonstrate compliance with the hours limit in this condition.

(b) For the Caterpillar G3408C LE generator engine, ENG003 (G1), the permittee shall operate and maintain the engine and monitoring equipment according to good air pollution control practices at all times, including startup, shutdown, and malfunction.

STATUS: In Compliance. See Status of Condition F11 for operating hours and F8 and Appendix A for maintenance records.

(F3) ENGINE REPLACEMENT [WAQSR Ch 6, Sec 2; Ch 6, Sec 3(h)(i)(I)]

(a) Permanent replacement of an engine must be evaluated by the Division under WAQSR Ch 6, Sec 2 prior to such replacement to determine the appropriate permitting action and evaluate the need for additional requirements resulting from the permanent replacement.

(b) Should an engine break down or require an overhaul, the permittee may bring on site and operate a temporary replacement engine until repairs are made. The temporary replacement unit shall be identical or similar to the unit replaced, with emission levels at or below those of the unit replaced. The permittee shall notify the Division in writing of such temporary replacement within five working days and include the following:

- (i) The startup date of the temporary replacement unit; and
- (ii) A statement regarding the applicability of any New Source Performance Standards (NSPS) in 40 CFR 60; any National Emission Standards for Hazardous Air Pollutants (NESHAPS) in 40 CFR 63; and Compliance Assurance Monitoring (CAM) in WAQSR Ch 7, Sec 3 for the temporary replacement unit.

STATUS: In Compliance. There have been no permanent or temporary engine replacements since the previous inspection.

Testing and Monitoring Requirements

(F4) EMISSIONS TESTING [W.S. 35-11-110]

(a) The Division reserves the right to require additional testing as provided under condition G1 of this permit. The Division shall specify the necessary test method(s) and procedure(s) prior to the test, which may include the following test methods found at 40 CFR 60, Appendix A:

- (i) For visible emissions, Method 9.
- (ii) For NO_x, CO and VOC emissions from any engines subject to the requirements of 40 CFR 60 Subpart JJJJ, follow the requirements of §60.4244.
- (iii) For alternative test methods, or methods used for other pollutants, the approval of the Administrator must be obtained prior to using the test method to measure emissions.
- (b) Unless otherwise specified, testing shall be conducted in accordance with WAQSR Ch 5, Sec 2(h).

STATUS: In Compliance. No additional emissions testing has been required since the last inspection.

(F5) VISIBLE EMISSIONS MONITORING [WAQSR Ch 6, Sec 3(h)(i)(C)(I)]

For visible emissions from the engines, ENG001-ENG003 (CG-11, CG-12 and G1), the permittee shall monitor the type of fuel used to ensure natural gas is the sole fuel source for these units.

STATUS: In Compliance: Natural gas is the only fuel used in CG-11, CG-12, and G1.

(F6) ENGINE MONITORING [WAQSR Ch 6, Sec 3(h)(i)(C)(I); WAQSR Ch 6, Sec 2 Permit P0020251]

The permittee shall monitor the non-emergency operating hours of the Caterpillar G3408C LE generator engine, ENG003 (G1), on a monthly basis to assess compliance with the hours limit specified in condition F2(a).

STATUS: In Compliance. See the Status of Condition 11.

Recordkeeping Requirements

(F7) TESTING AND MONITORING RECORDS [WAQSR Ch 6, Sec 3(h)(i)(C)(II); WAQSR Ch 6, Sec 2 Permit P0020251]

- (a) For any testing or monitoring performed under conditions F4, other than Method 9 observations, the permittee shall record, as applicable, the following:
 - (i) The date, place, and time of sampling, measurements, or observations;
 - (ii) The date(s) analyses were performed;
 - (iii) The company or entity that performed the analyses or observations;
 - (iv) The analytical techniques or methods used;
 - (v) The results of such analyses or observations; and
 - (vi) The operating conditions and parameters as they existed at the time of testing, monitoring, or observation including horsepower for engines.
- (b) For any Method 9 observations required by the Division under condition F4, the permittee shall keep field records in accordance with Section 2.2 of Method 9.
- (c) For the monitoring required by condition F6, the permittee shall record the monthly non-emergency operating hours for the Caterpillar G3408C LE generator engine, ENG003 (G1).
- (d) The permittee shall retain these records on-site at the facility for a period of at least five years from the date the records are generated.

STATUS: In Compliance: No testing has been required under Condition F4. Engine operating parameters are recorded and electronically logged and stored in Colorado Springs. Generator operating hours are recorded and submitted in semi-annual reporting.

Reporting Requirements

(F8) MAINTENANCE RECORDS [WAQSR Ch 6, Sec 3(h)(i)(C)(II); WAQSR Ch 6, Sec 2 Permit P0020251]

(a) The permittee shall maintain records of maintenance activities required by condition F2(b) for the Caterpillar G3408C LE generator engine, ENG003 (G1), which shall include:

- (i) The maintenance activity performed;
- (ii) The date and place the activity was performed;
- (iii) The company and individual(s) that performed the activity;
- (iv) The purpose of the activity; and
- (v) An explanation for any deviation from the good air pollution control practices.

(b) The permittee shall retain these records on-site at the facility for a period of at least five years from the date the records are generated.

STATUS: In Compliance. CIG maintains the required records. Examples are shown in Appendix A.

(F9) NOTIFICATION REQUIREMENTS [WAQSR Ch 6, Sec 3(h)(i)(C)(III)]

(a) If the testing is used to meet the test requirements of 40 CFR 60 Subpart JJJJ, the permittee shall provide test notifications as specified in §60.8 of 40 CFR 60.

(b) If the testing is used to meet the test requirements of 40 CFR 63 Subpart ZZZZ, the permittee shall provide test notifications as specified in §63.7 of 40 CFR 63.

(c) Upon shutdown and removal of an engine from the facility, written notification is required within 15 days of removal. Such notification shall be submitted on a complete Engine Installation/Removal form. The form can be downloaded from the Air Quality Division website <http://deq.wyoming.gov/aqd/new-source-review/> or obtained from the Air Quality Division.

(d) Notifications may be provided electronically through the Division's IMPACT system (<https://airimpact.wyo.gov>), or in writing to the DEQ Air Quality Contact listed on page 3 of this permit.

STATUS: In Compliance. Notifications are submitted as required.

(F10) TEST REPORTS [WAQSR Ch 6, Sec 3(h)(i)(C)(III)]

(a) The permittee shall report the results of any emissions tests performed under conditions F4 within 45 days of completing the tests. The reports shall include the information indicated in condition F7(a).

(b) The reports shall reference this permit condition (F10) and be submitted to the Division in accordance with condition G4.

STATUS: In Compliance. No testing has been required under Condition F4.

(F11) MONITORING REPORTS [WAQSR Ch 6, Sec 3(h)(i)(C)(III)]

(a) The following shall be reported to the Division for each semiannual reporting period from January 1 through June 30, and from July 1 through December 31, within 31 days of the end of each period (by July 31 and January 31, respectively, each year):

(i) A statement verifying that the emissions units listed in condition F5 fired only natural gas during the reporting period.

(ii) The calendar year-to-date non-emergency operating hours for the Caterpillar G3408C LE generator engine, ENG003 (G1).

(b) All instances of deviations from the conditions of this permit must be clearly identified in each report.

(c) The reports shall reference this permit condition (F11), and be submitted to the Division in accordance with condition G4.

STATUS: In Compliance. Semi-Annual monitoring reports were received as shown in the Colorado Interstate Gas Elk Basin Compressor Station Compliance Report Summary table. A deviation was reported in the second semi-annual monitoring report and year 2015 compliance certification for the failed g/hphr NOx emissions test of the Caterpillar G3408CLE emergency generator engine on November 13, 2015. No deviations were reported for 2016 or 2017. Generator engine G1 operating hours since the previous inspection are:

2015: 19.25

2016: 26 hours

2017: 44.75 hours

January to March 2018: 6.75 hours

(F12) GREENHOUSE GAS REPORTS [W.S. 35-11-110]

The permittee shall submit to the Division a summary of any report(s) required to be submitted to the EPA under 40 CFR 98.

(a) The reports shall be submitted to the Division within 60 days of submission to EPA, in a format as specified by the Division.

(b) The reports shall be submitted in accordance with condition G4(a) of this permit, to the attention of the Division's Emission Inventory Program.

STATUS: In Compliance. No reporting is required since the facility is under the 25,000 ton CO2 reporting threshold.

(F13) REPORTING EXCESS EMISSIONS & DEVIATIONS FROM PERMIT REQUIREMENTS

[WAQSR Ch 6, Sec 3(h)(i)(C)(III)]

(a) General reporting requirements are described under the General Conditions of this permit. The Division reserves the right to require reports as provided under condition G1 of this permit.

(b) Emissions which exceed the limits specified in this permit and which are not reported under a different condition of this permit shall be reported annually with the emission inventory unless specifically superseded by condition G17, condition G19, or other condition(s) of this permit. The probable cause of such exceedance, the duration of the exceedance, the magnitude of the exceedance, and any corrective actions or preventative measures taken shall be included in this annual report. For sources and pollutants which are not continuously monitored, if at any time emissions exceed the limits specified in this permit by 100 percent, or if a single episode of emission limit exceedance spans a period of 24 hours or more, such exceedance shall be reported to the Division within one working day of the exceedance. (Excess emissions due to an emergency shall be reported as specified in condition G17.

Excess emissions due to unavoidable equipment malfunction shall be reported as specified in condition G19.)

(c) Any other deviation from the conditions of this permit shall be reported to the Division in writing or electronically through the Division's IMPACT system (<https://airimpact.wyo.gov>), within 30 days of the deviation or discovery of the deviation.

STATUS: In Compliance. A deviation was reported in the second semi-annual monitoring report and year 2015 compliance certification for the failed g/hphr NOx emissions test of the Caterpillar G3408CLE emergency generator engine on November 13, 2015. To address this concern, permit P0020251 was issued August 29, 2016 to remove the test requirement and limit the engine to 100 hours of annual operation under the new permit as an emergency unit. It was previously limited to 500 hours of annual operation under Permit 3-3-044. No other excess emissions have been reported since the last inspection on October 6, 2015.

WAQSR CHAPTER 5, SECTION 2 NEW SOURCE PERFORMANCE STANDARDS (NSPS) AND
40 CFR 60 SUBPART JJJJ REQUIREMENTS FOR STATIONARY SPARK IGNITION INTERNAL COMBUSTION
ENGINES

SUBPART JJJJ REQUIREMENTS [40 CFR Part 60 Subparts A and JJJJ; WAQSR Ch 5, Sec 2]

The permittee shall meet all applicable requirements of 40 CFR 60 Subparts A and JJJJ and WAQSR Ch 5, Sec 2, as they apply to affected stationary spark ignition (SI) internal combustion engines (ICE). (As required by condition F3(b), if an engine is replaced or reconstructed, subpart applicability will need to be re-evaluated and a statement regarding applicability submitted to the Division.) For the purposes of this subpart, the date that construction commences is the date the engine is ordered by the owner or operator. An affected source is defined at §60.4230.

On November 21, 2017, according to information submitted to the Division by the permittee, the Dresser-Clark HLA10T compressor engines, ENG001 and ENG002 (CG-11 and CG-12), and the Caterpillar G3408C LE generator engine, ENG003 (G1), were not subject to Subpart JJJJ based on their date of construction and date of manufacture.

STATUS: In Compliance. The Caterpillar G3408C LE generator engine was ordered June 27, 2005, and manufactured October 10, 2005. Since the engine was manufactured prior to January 1, 2009, it has no requirements under Subpart JJJJ.

WAQSR CHAPTER 5, SECTION 3 NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS
(NESHAPS) AND
40 CFR 63 SUBPART ZZZZ REQUIREMENTS FOR STATIONARY RECIPROCATING INTERNAL COMBUSTION
ENGINES

SUBPART ZZZZ REQUIREMENTS [40 CFR 63 Subparts A and ZZZZ; WAQSR Ch 5, Sec 3]

The permittee shall meet all applicable requirements of 40 CFR 63 Subparts A and ZZZZ and WAQSR Ch 5, Sec 3, as they apply to each affected source as indicated in §63.6590(a). An affected source is any existing, new, or reconstructed stationary RICE located at a major or area source of HAP emissions, excluding stationary RICE being tested at a stationary RICE test cell/stand. (As required by condition F3(b), if an engine is replaced or reconstructed, subpart applicability will need to be re-evaluated and a statement regarding applicability submitted to the Division.) This facility is currently identified as a major source of HAP emissions. Affected sources at this facility include the Dresser-Clark HLA10T compressor engines, ENG001 and ENG002 (CG-11 and CG-12), and the Caterpillar G3408C LE generator engine, ENG003 (G1).

STATUS: In Compliance. As the Elk Basin Compressor Station is a major source of HAP, the 2SLB Dresser-Clark compressor engines are specifically exempted from requirements. The 375 hp Caterpillar G3408LE generator engine has maintenance and monitoring requirements that were discussed and records reviewed at the FY18 inspection. Maintenance records are shown Appendix A. Other records related to engine oil analysis are maintained. The engine is an emergency generator that rarely operates. Engine operation is limited to 100 hours per year for maintenance and testing. The generator operating hours since the previous inspection are:

2015: 19.25
2016: 26 hours
2017: 44.75 hours
January to March 2018: 6.75 hours

40 CFR 60 SUBPART OOOOa REQUIREMENTS FOR CRUDE OIL AND NATURAL GAS FACILITIES
FOR WHICH CONSTRUCTION, MODIFICATION OR RECONSTRUCTION COMMENCED
AFTER SEPTEMBER 18, 2015

SUBPART OOOOa REQUIREMENTS [40 CFR 60 Subparts A and OOOOa; WAQSR Ch 5, Sec 2]
The permittee shall meet all applicable requirements of 40 CFR 60 Subparts A and OOOOa and WAQSR Ch 5, Sec 2, as they apply to affected facilities as specified under §60.5365a.

STATUS: In Compliance. 40 CFR 60 Subpart OOOOa applies only to facilities constructed, modified or reconstructed after September 18, 2015. The CIG Elk Basin Compressor Station has not been modified since that time.

COMPLIANCE CERTIFICATION AND SCHEDULE

Compliance Certification [WAQSR Ch 6, Sec 3(h)(iii)(E)]

(C1) (a) The permittee shall submit by January 31 each year a certification addressing compliance with the requirements of this permit. The certification shall be submitted as a stand-alone document separate from any monitoring reports required under this permit.

- (b) (i) For visible emissions from the units specified in condition F5, the permittee shall assess compliance with condition F1 by verifying natural gas was the sole fuel source used for these units.
 - (ii) For the non-emergency operating hours limit, the permittee shall assess compliance with condition F2(a) by conducting the monitoring required by condition F6.
 - (iii) For the maintenance requirement, the permittee shall assess compliance with condition F2(b) by reviewing the records kept in accordance with condition F8.
 - (iv) For greenhouse gas reporting, the permittee shall assess compliance with condition F12 by verifying that reports were submitted in accordance with condition F12(a) and (b).
 - (v) For any engine subject to 40 CFR 60 Subpart JJJJ, the permittee shall assess compliance with Subpart JJJJ by conducting any applicable testing and monitoring required by §§60.4237, 60.4243, and 60.4244, and by reviewing the records required by §§60.4245 and 60.4246.
 - (vi) For any affected facility subject to 40 CFR 60 Subpart OOOOa, the permittee shall assess compliance with Subpart OOOOa by conducting any applicable testing and monitoring required by §§60.5410a through 60.5417a and by reviewing any applicable records required by §60.5420.
 - (vii) For the reciprocating internal combustion engines, the permittee shall assess compliance with 40 CFR 63 Subpart ZZZZ by conducting any applicable testing and monitoring required by §§63.6610 through 63.6640 and by reviewing the records required by §§63.6655 and 63.6665.
 - (c) The compliance certification shall include:
 - (i) The permit condition or applicable requirement that is the basis of the certification;
 - (ii) The current compliance status;
 - (iii) Whether compliance was continuous or intermittent; and
 - (iv) The methods used for determining compliance.
 - (d) For any permit conditions or applicable requirements for which the source is not in compliance, the permittee shall submit with the compliance certification a proposed compliance plan and schedule for Division approval.
 - (e) The compliance certification shall be submitted to the Division in accordance with condition G4 of this permit and to the Assistant Regional Administrator, Office of Enforcement, Compliance, and Environmental Justice (8ENF-T), U.S. EPA - Region VIII, 1595 Wynkoop Street, Denver, CO 80202-1129.
 - (f) Determinations of compliance or violations of this permit are not restricted to the monitoring requirements listed in paragraph (b) of this condition; other credible evidence may be used.
- Compliance Schedule [WAQSR Ch 6, Sec 3(h)(iii)(C) and (D)]
- (C2) The permittee shall continue to comply with the applicable requirements with which the permittee has certified that it is already in compliance.
 - (C3) The permittee shall comply in a timely manner with applicable requirements that become effective during the term of this permit.

STATUS: In Compliance. Compliance Certifications have been received as required and are summarized in the Colorado Interstate Gas Elk Basin Compressor Station Compliance Report Summary table. A deviation was reported in the second semi-annual monitoring report and year 2015 compliance certification for the failed g/hphr NOx emissions test of the Caterpillar G3408CLE emergency generator engine on November 13, 2015. No deviations were reported for 2016 or 2017.

APPENDIX A

Colorado Interstate Gas Company, LLC

Elk Basin Compressor Station

1) Caterpillar G3408C LE Maintenance Records

OPS - 13231 0841

Elk Basin Emergency Generator

Hold alarm codes to clear

Date	Hours	Oil level	Oil used	Coolant	Oil sample	Oil change	Belts	Air filter	Spark plugs
12-5-13	1417	✓		✓	N	✓	✓	✓	✓
12-24-13	1417	✓		✓	Y	N	✓		
1-28-14	1418	✓		✓			✓		
6-4-14	1418	✓		✓			✓		
8-29-14	1419	✓		✓			✓		
9-2-14	150	✓		✓	Y		✓		
10-6-14	153	✓		✓	Y		✓		
11-3-14	155	✓		✓			✓		
1-5-15	158	✓		✓	Y	N	✓		
3-31-15	169	✓		✓	Y	N	✓	Replaced	Replaced
5-5-15	171	X		X			X		
8-10-15	173	X		X	Y		X		
11-21-15	177	X		X	Y		X	New Turbo	
3-17-16	189	✓		✓			X		
3-16-16	191	✓		✓			✓	inspected (aspirate)	
4-17-16	192	✓		✓	Y		✓		
5-2-16	194	✓		✓			✓		
5-4-16	194								
6-1-16	196	✓		✓			✓		
7-26-16	200	✓	1	✓			✓		
8-5-16	201								
9-27-16	204								
10-20-16	206	✓		✓			✓		
10-25-16	206	✓		✓	Y		✓		
11-9-16	208	✓							
11-30-16	209								
12-20-16	211	✓		✓			✓		
1-5-17	212								
12-20-17	214								
3-22-17	218	✓		✓	Y		✓	Replaced	Replaced

ASpirate
100

Elk Basin Emergency Generator

Date	Hours	Oil level	Oil used	Coolant	Oil sample	Oil change	Belts	Air filter	Spark plugs
1-31-17	215	✓		✓	Y		✓		
4-5-17	220	✓		✓			✓		
4-28-17	223	✓		✓			✓		
5-25-17	225	X		X	Y		X		
6-8-17	226	X		X			X	inspected	
7-5-17	228								
7-19-17	228								
7-31-17	228								
8-2-17	229	X		X	Y		X		
8-16-17	229								
9-13-17	232	✓		✓			✓		
10-6-17	233								
10-31-17	235	✓		✓			✓		
11-3-17	240								
12-7-17	243	✓		✓	Y		✓		
1-4-18	245	✓		✓			✓		
2-1-18	245				Y				
3-22-18	247	✓		✓			✓	inspected	Replaced